

Appendix: Complete Listing of Claims

We claim:

Claims 1-15 (canceled)

Claim 16 (currently amended): A heat exchanger for transferring heat between a first fluid and a second fluid; wherein said heat exchanger comprises first fluid channels through which the first fluid may flow, and one or more second, multiply interconnected fluid channels through which the second fluid may flow, wherein said second fluid channels lie generally in a plane; wherein said first fluid channels and said second fluid channels interleave, so that heat may be transferred between said first fluid channels and said second fluid channels; wherein the direction of flow of said first fluid channels is generally perpendicular to the [direction of flow] plane of said second fluid channels; wherein the thickness of said heat exchanger, in the direction of flow of said first fluid channels, is less than about 6.0 mm; and wherein said heat exchanger has a density of said first fluid channels greater than about 50 per square centimeter.

Claim 17 (original): A heat exchanger as recited in Claim 16, wherein said first fluid channels are adapted for the flow of a gas, and wherein said second fluid channels are adapted for the flow of a liquid.

Claim 18 (original): A heat exchanger as recited in Claim 16, wherein the thickness of said heat exchanger, in the direction of flow of said first fluid channels, is less than about 2.0 mm.

Claim 19 (original): A heat exchanger as recited in Claim **16**, wherein the thickness of said heat exchanger, in the direction of flow of said first fluid channels, is less than about 1.0 mm.

Claim 20 (original): A heat exchanger as recited in Claim **16**, wherein said heat exchanger has a density of said first fluid channels greater than about 200 per square centimeter.

Claim 21 (original): A heat exchanger as recited in Claim **16**, wherein the thickness of said heat exchanger, in the direction of flow of said first fluid channels, is less than about 1.0 mm; and wherein said heat exchanger has a density of said first fluid channels greater than about 200 per square centimeter.

Claims 22-24 (Canceled)

Claim 25 (original): A heat exchanger as recited in Claim **16**, wherein said heat exchanger is fabricated from metal.

Claims 26-35 (canceled)

Claim 36 (previously presented): A heat exchanger as recited in Claim **16**, wherein said heat exchanger is fabricated from nickel.